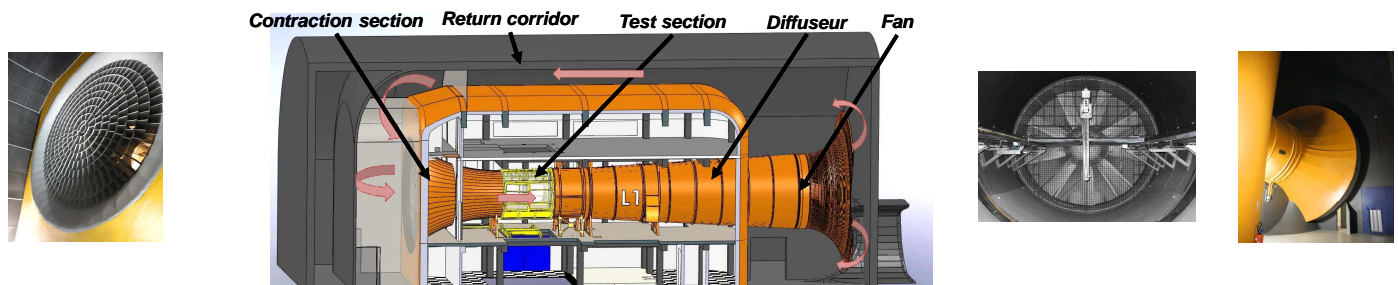


LOW SPEED WIND TUNNEL L1

Low speed wind tunnel for aerodynamics studies of 2D and 3D configurations.

Static and dynamic aerodynamics characterisation for civil and military aviation, innovative concept testing, advanced technologies validation, motorized model testing.

PRINCIPLE Eiffel-type wind tunnel with streamlined return corridor – Maximum velocity 75 m/s – Turbulence 0.3%



DESCRIPTION

2.4 meters long modular test section :

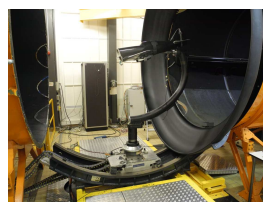
- Open test section
- Cylindrical 2.4 meters closed test section (with optional 2D horizontal floors)
- Dodecagonal test section of height 2.4 m (with optional 2D horizontal and vertical floors)

Different mounting (static or dynamic) for 2D and 3D model:

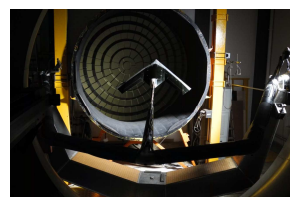
- On walls
- On mast or sting



2D floor
Cylindrical test section



Gooseneck sting mounted on vertical mast



Aft sting of PQR device



Mounting on vertical mast



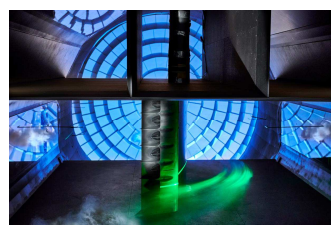
Optical test section

AVAILABLE MEASUREMENTS

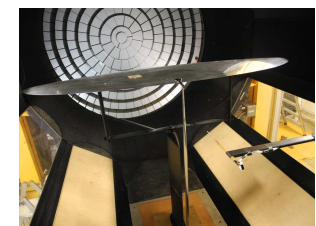
- Aerodynamics characterisation, aerodynamics force and moment measurements (6 components balance, Monnin balance, inclinometers)
- Wall pressure measurements and pressure sounding in the flow field
- Local velocity measurement (hot wire on 3 directional cross-beam sounding device)
- Measurement of velocity field by PIV (dodecagonal optical test section)
- Visualisation by laser tomography



Flow control on UCAV



Distributed motorization concept



Drag extraction by wake survey

CONTACT

<https://www.onera.fr/en/daaa/contact>

PARTNERS ET FUNDERS